

## CLAIMS

### What is Claimed is:

1. A seaming iron for use with thermally-activated seaming tapes, the  
5 seaming iron comprising:
  - a thermally conductive platen having a leading edge, a trailing edge, an upper surface, and a bottom surface;
  - a heating element in thermally conductive contact with the platen;
  - a bridge connected to the platen, configured to provide a passageway  
10 between the upper surface of the platen and an undersurface of the bridge, the passageway large enough to permit a length of seaming tape to be drawn lengthwise through the passageway over the platen; and
  - a handle connected to the bridge, the handle extending above the passageway away from the platen.
- 15 2. The seaming iron of Claim 1, further comprising a blade-like support comprising a connection between the handle and the bridge.
3. The seaming iron of Claim 2, wherein the blade-like support is oriented along a central longitudinal axis of the platen.
4. The seaming iron of Claim 1, further comprising a thermal insulating  
20 material covering at least a substantial portion of the bottom surface of the platen.
5. The seaming iron of Claim 4, wherein the thermal insulating material is spaced apart from the bottom surface of the platen.
6. The seaming iron of Claim 1, wherein the handle comprises a thermally non-conductive material.

7. The seaming iron of Claim 1, wherein the bridge comprises a portion that is movable in a direction along a longitudinal axis of the platen.

8. The seaming iron of Claim 1, wherein the upper surface of the platen is substantially flat.

5 9. The seaming iron of Claim 1, wherein the bottom surface of the platen is substantially flat.

10. The seaming iron of Claim 1, wherein the platen is tapered to a minimum thickness adjacent to its trailing edge.

10 11. The seaming iron of Claim 1, wherein the upper surface of the platen has a generally convex curvature.

12. The seaming iron of Claim 11, wherein upper surface of the platen is shaped progressively flatter towards the trailing edge.

15 13. The seaming iron of Claim 1, wherein the upper surface of the platen has a generally concave curvature on opposite sides of a ridge running along a central longitudinal axis of the platen.

14. The seaming iron of Claim 1, further comprising an electrical connector adjacent to a side of the platen, for connecting the heating element to a source of electrical power.

20 15. The seaming iron of Claim 1, wherein the bridge further comprises parallel sidewalls spaced a distance apart, the distance approximately equal to a maximum width of the seaming tape.

16. The seaming iron of Claim 1, further comprising a friction-reducing coating disposed on the upper surface of the platen.

17. The seaming iron of Claim 1, further comprising a temperature sensor connected to the platen and configured to measure a temperature of the platen.

18. A method for seaming adjacent pieces of carpet using a thermally-activated seaming tape having a thermal adhesive on an upper side of the tape, and a  
5 seaming iron having a passageway interposed between a handle and a heated platen, the method comprising:

positioning the platen and passageway of the seaming iron on a supporting surface underneath the adjacent pieces of carpet, with the handle protruding between and above the adjacent pieces of carpet;

10 positioning the seaming tape in the passageway in contact with the platen, with the upper side of the tape facing a backing of each of the pieces of carpet and facing away from the platen;

heating the platen so as to melt the thermal adhesive on the seaming tape at a molten portion;

15 positioning the carpet together with the backing of each of the adjacent pieces of carpet in the molten portion of the seaming tape; and

moving the seaming iron forward between the adjacent pieces of carpet away from the molten portion, thereby cooling the thermal adhesive to harden it and to fix the seaming tape to the backing of each of the adjacent pieces of carpet.

20 19. The method of Claim 18, wherein the third positioning step further comprises gathering molten adhesive along an edge of each of the adjacent pieces of carpet by moving the adjacent pieces of carpet together while in the molten portion of seaming tape.

20. The method of Claim 19, further comprising cooling the gathered molten  
25 adhesive to harden it and fix it to adjoining butted edges of the backing of each of the adjacent pieces of carpet.